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ABSTRACT

Using information collected by the Office of Demographic Studies in its 1977-78 Annual Survey of Hearing Impaired Children and Youth and from a 1974 special studies survey, this study examines the similarities and differences between day and resident students at residential schools for the deaf. The students at residential schools on a day basis tended to be younger, to come from relatively more affluent family backgrounds, and to be White. Further, the percentages of commuter students who wore hearing aids and who were rated as having intelligible speech were greater than the corresponding percentages in the resident group. There was a slightly higher percentage of mental retardation and emotional/behavioral problems among the students in residence. Distribution of degree of hearing loss and achievement test performance were similar for the two groups. (Author)

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As is true of all projects of the Office of Demographic Studies, this paper represents the efforts of all members of the ODS staff. The analysis of data and the subsequent writing of a report for publication are merely the last steps.

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COMMUTER STUDENTS AT RESIDENTIAL SCHOOLS FOR THE DEAF

Michael A. Karchmer
Linda M. Petersen

Students who attend residential schools for the deaf fall into two distinct groups: those who attend residential schools and reside at the facilities, and those who live at home and attend on a day basis, i.e., commute to school. Recent evidence from the Office of Demographic Studies has made it increasingly clear that the two groups differ in significant ways (Jensema, Karchmer, & Trybus, 1978; Karchmer & Kirwin, 1977). Surprisingly, aside from the references just cited, there has been almost no mention in the literature of this issue. The only other readily accessible study that compares commuter and resident students at residential schools for the deaf is a monograph nearly 20 years old (Quigley & Frisina, 1961).

The purpose of this paper, then, is to summarize the ways in which commuter students, as a group, differ from and at the same time resemble the students who attend the same educational program, but reside on campus.

DATA SOURCES

The data to be discussed come from two sources. Part of the information is from the Annual Survey of Hearing Impaired Children and Youth for the 1977-78 school year. This survey, conducted by the Office of Demographic Studies (ODS), includes information obtained on 54,080 students in approximately 700 special education programs throughout the country. This number represents almost 80% of the total population estimated to be enrolled in special education programs for the hearing impaired in the United States and includes 17,182 students reported from residential schools for the deaf. The remainder of the data comes from a 1974 ODS special survey of a national sample of teachers of 997 hearing impaired students, 423 of whom were reported to be enrolled in residential schools for the deaf. This survey elicited information on a wide range of topics not generally included in the Annual Survey; in addition, academic achievement test scores on the Special Edition of the Stanford Achievement Test for Hearing Impaired Students were reported for most of these students. Details of the data collection procedures used in this survey can be found in Karchmer and Kirwin (1977).

It should be noted that there is much overlap in the kinds of information collected in the two surveys. In general, where this overlapping did occur, comparison of the two data files revealed very few discrepancies in their content. Hence, in this paper, when there was a choice, we have elected to display the Annual Survey information, since it is more recent and includes a far larger number of students.

RESULTS

Residential school students make up a sizable proportion of the hearing impaired population receiving special education services. However, although about 32% of all students reported to the Annual Survey in 1977-78 were enrolled in residential schools, not all of the students in these schools actually lived on campus. In 1977-78, about 4,000 or 24% of the more than 17,000 reported residential school students lived at home and attended school on a day basis.

The characteristics of this group of day students at residential schools differ in a number of ways from the group in residence. There is, however, one important commonality: the distributions of degree of hearing loss are virtually identical, with profoundly deaf students (> 90dB) accounting for almost two-thirds of both groups. Students with at least severe losses (> 70dB) account for 90% of the respective totals. This pattern contrasts with other special education settings for the hearing impaired, especially with the patterns seen in "mainstream" programs (Karchmer, Milone, & Wolk, 1979). Significant hearing loss, then, appears to be one student characteristic strongly related to residential school placement.

There are several ways in which the day and resident groups do differ. The resident group is older by an average of two years. As shown in Table 1, over three-quarters of these students in residence are 12 years old or older, whereas only 59% of the day students have reached that age. Figure 1 presents the same information in a slightly different fashion, showing that the percentage of day students in residential schools steadily decreases by age: the great majority of day students age 5 and younger live at home, but relatively small percentages of the older groups do so.

Figure 2 presents graphically information on the ethnic background of residential school students. The fact that relatively more white students and fewer black are commuters may be related to economic factors; the 1974 ODS sample revealed that nearly twice as many commuter students as resident students came from families with incomes of $15,000 or more (31% versus 17%).

TABLE 1: AGE DISTRIBUTIONS OF RESIDENT AND DAY STUDENTS AT RESIDENTIAL SCHOOLS FOR THE DEAF (ANNUAL SURVEY OF HEARING IMPAIRED CHILDREN AND YOUTH, 1977-78)

Type of Student	*5 Years & Younger*	*6-8 Years*	*9-11 Years*	*12-14 Years*	*15-17 Years*	*18 Years & Older*	*Totals*
Resident Students							
Percent	1.8	8.0	13.1	33.1	24.3	19.7	100.0
Number	(234)	(1,032)	(1,675)	(4,243)	(3,115)	(2,530)	(12,829)
Day Students							
Percent	11.1	14.3	15.9	31.6	15.5	11.5	100.0
Number	(452)	(582)	(648)	(1,287)	(630)	(468)	(4,067)

Overall, the percentages of students with educationally significant handicaps additional to deafness are similar for the two groups, about 25%. But two specific handicapping conditions appear more frequently in the group in residence: mental retardation (6.3% versus 4.0% for the day group) and emotional/behavioral problems (8.0% versus 6.2% for the day group). Both of these conditions, of course, are known to negatively affect school achievement (Jensema, 1975).

Speech intelligibility, as rated by classroom teachers, appears related to day or resident status at these schools. Using data from the 1974 special survey, Jensema, Karchmer, and Trybus (1978) reported that at each hearing level more day students at residential schools were rated by their teachers as speaking intelligibly than were residential students. Table 2, excerpted from Jensema et al. (1978), shows these comparisons.

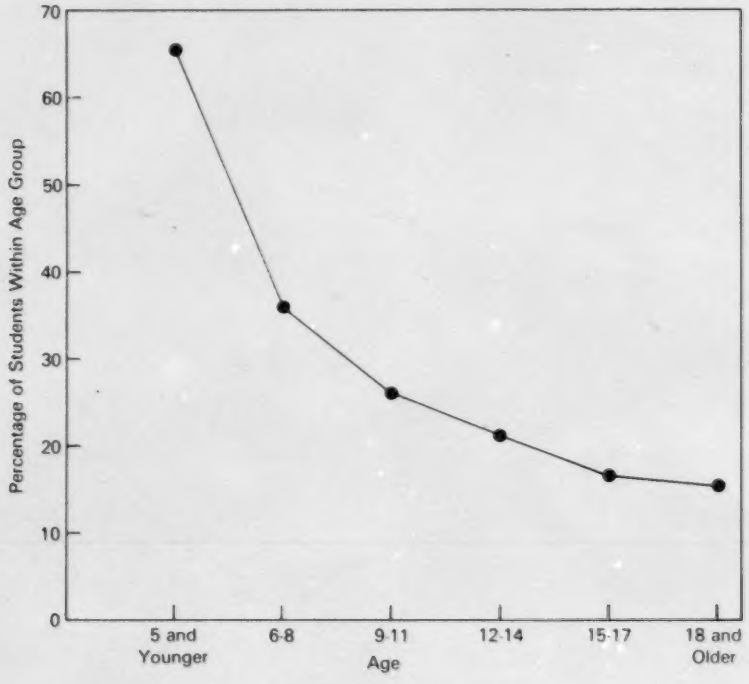

Figure 1

Percentage by Age of Students at Residential Schools for the Deaf Who Live at Home and Attend on a Day Basis

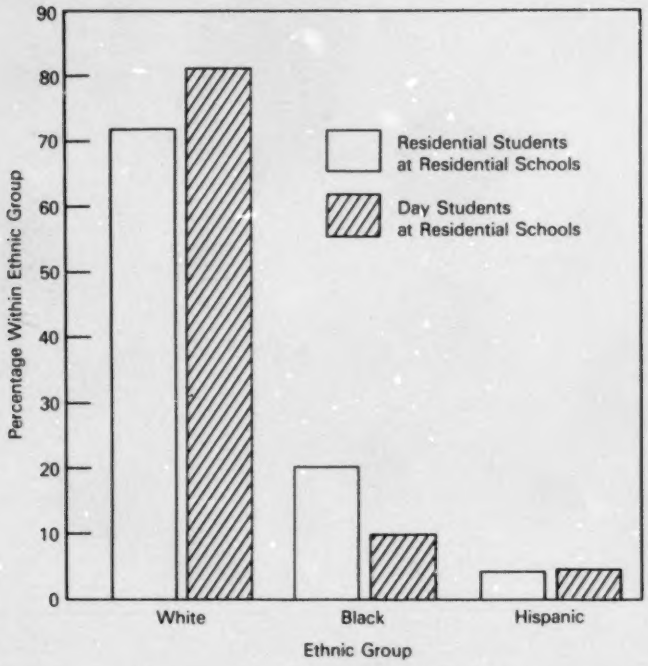

Figure 2

Distributions of Ethnic Groups at Residential Schools for the Deaf: Residential versus Day Students

Hearing aid use also has been shown to be related to whether students attend residential schools on a day or live-in basis, as illustrated in Figure 3 (taken from Karchmer & Kirwin, 1977). The students in residence are far more likely not to use hearing aids, a somewhat surprising finding, considering the similarity of distributions of hearing loss for the two groups.

In view of the differences between day and resident students outlined above, it might reasonably be expected that the two groups would also differ in academic achievement. Despite the fact that the day group tends to have characteristics that typically correlate positively with achievement (e.g., better speech intelligibility, fewer minority students, greater hearing aid use, less mental retardation), such a result is not reflected in achievement comparisons, as shown in Figure 4. This figure summarizes achievement test performance of residential school students in math computation and reading comprehension on the Special Edition of the Stanford Achievement Test for Hearing Impaired Students during the 1974 national testing program. The analyses for each of these two content areas revealed that while day and resident students improved their performance as they grew older, there were no significant differences between the two groups (Fs<1). This was true even when other variables normally associated with differences in achievement level were left in the analysis.

TABLE 2: PERCENTAGES OF RESIDENTIAL SCHOOL STUDENTS RATED BY THEIR TEACHERS AS HAVING INTELLIGIBLE SPEECH: RESIDENT VERSUS DAY STUDENTS, BY HEARING LEVEL

Residential Status	*Less than Severe (≤70 dB)*	*Severe (71-90 dB)*	*Profound (≥91 dB)*	*Average*
Residential School, Residential Students	66.6%	45.2%	17.3%	28.5%
Residential School, Day Students	80.0%	66.7%	31.1%	44.1%

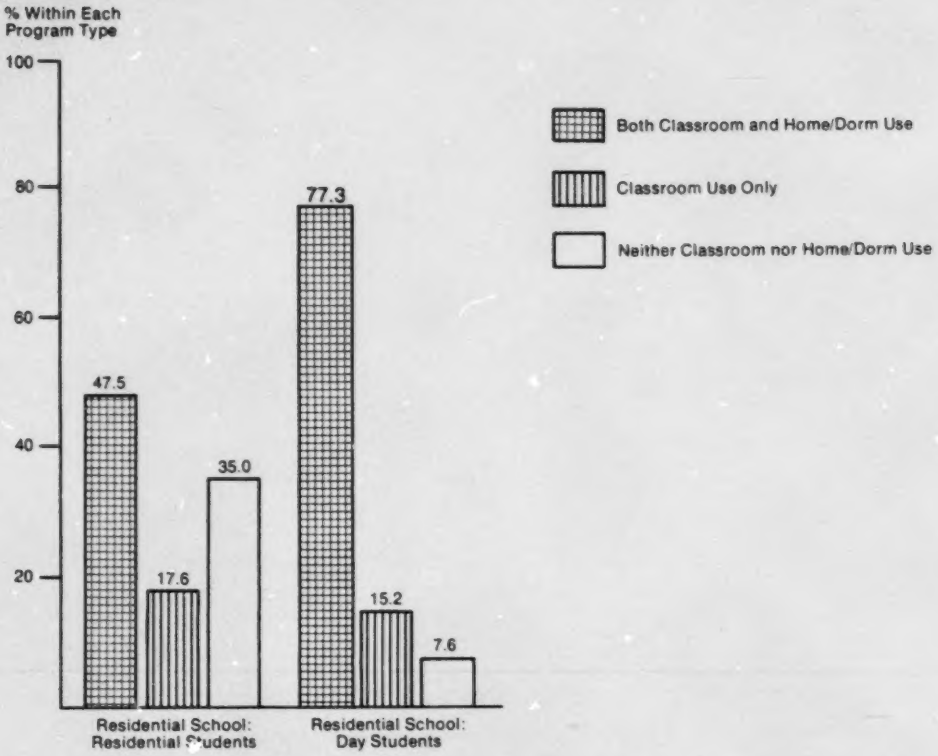

Figure 3

Hearing Aid Use: Resident versus Day Students at Residential Schools for the Deaf

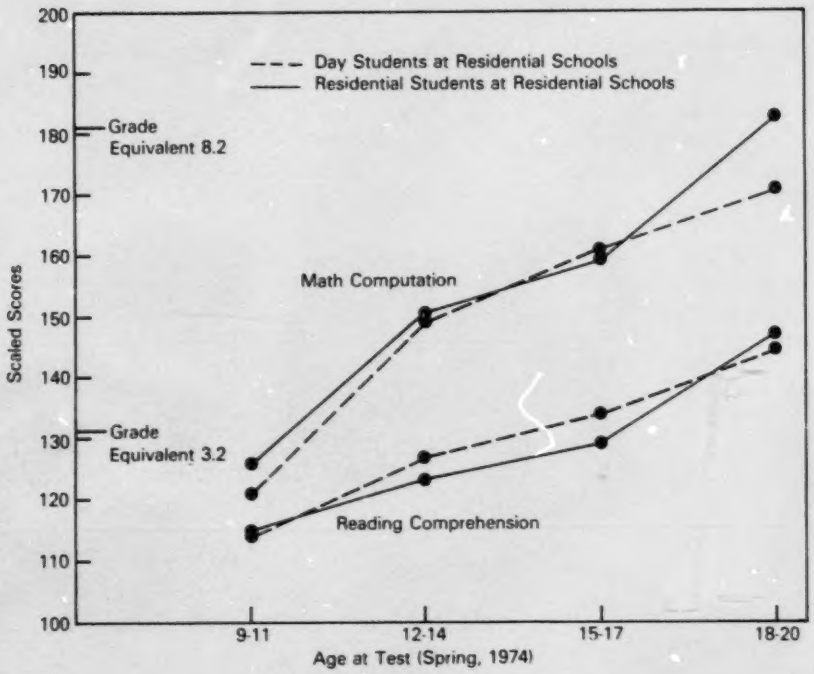

Figure 4

Reading Comprehension and Math Computation Performance of Residential School Students on the SAT-HI by Age and Residential Status

SUMMARY

The comparisons presented here between the group of students who attend residential schools on a day basis and the group living at these facilities reveal some intriguing similarities as well as differences. One important result would seem to be the similarity in the distribution of hearing loss that obtains for the two groups. For both the resident and day students, the major concomitant of residential school placement is a significant hearing loss.

On the other hand, there was a variety of differences between the two groups. In comparison with the students living on campus, the students at residential schools on a day basis tended to be younger, to come from relatively more affluent family backgrounds, and to be white. There was a slightly higher percentage of mental retardation and emotional/behavioral problems among the students in residence. Further, the percentages of commuter students who wore hearing aids and who were rated as having intelligible speech were higher than the corresponding percentages in the resident group. (It should be noted that the evidence presented here does not imply causality of any kind.)

The presence of these differences in the characteristics of the two groups of residential school students would seem to suggest differences in academic achievement test scores between the two groups. Such, however, was shown not to be the case: residential school students of given age groups performed similarly, whether or not they lived on campus. Although it is perhaps unwise to overinterpret null results, there can be no doubt that these achievement test data raise questions for further study.

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THE OFFICE OF DEMOGRAPHIC STUDIES

The Office of Demographic Studies was established in 1968 to serve as a national statistical center for the field of deafness. Its purpose is to collect, analyze, and publish information on hearing impaired persons, to provide tabulations, national sampling frames, and other data-oriented services to special educational programs and to professionals in the field, to collaborate in cooperative research projects, and to serve as consultant and resource for projects involving data collection and analysis.

The data collected by the Office are confidential; no information which would permit the identification of an individual or cooperating school as the source of that information is ever released without the necessary written permission. Within the limits of this confidentiality, the Office actively encourages the use of its information and services by administrators, researchers, and others providing services to hearing impaired persons.

In its work of developing and disseminating useful information, the Office has the benefit of the guidance and advice of its U.S.-Canadian Advisory Committee, whose names are listed earlier in this publication. Among its members are hearing and deaf individuals, administrators, teachers and specialists from other areas within the field of hearing impairment. Every attempt is made to maintain a wide diversity of interests and competencies, as well as geographic representation, among its members.

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The Office of Demographic Studies has published numerous articles and monographs on hearing impaired students. For further information contact:

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